



(51) International Patent Classification:
C02F 11/02 (2006.01) *B09B 3/00* (2006.01)

(21) International Application Number:
PCT/US2011/043895

(22) International Filing Date:
13 July 2011 (13.07.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/363,964 13 July 2010 (13.07.2010) US

(71) Applicant (for all designated States except US): **ECOLOGICO-LOGIC, INC.** [US/US]; 3094 Research Way No. 60, Carson City, Nevada 89706 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HIATT, William, Nicholas** [US/US]; 2201 E. Willow St., No. 0849, Signal

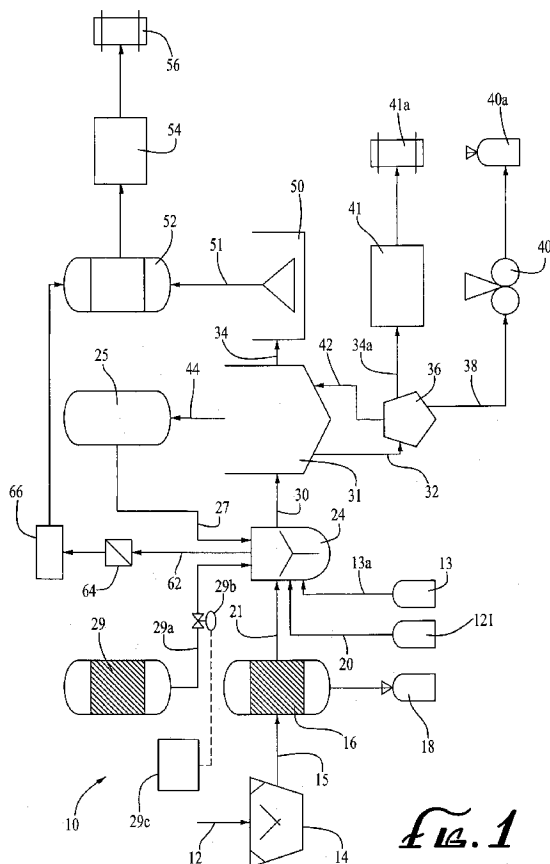
Hill, California 90755 (US). **MEMON, Mohammed** [US/US]; 10412 Circulo De Zapata, Fountain Valley, California 92708 (US). **DICKINSON, Jacob, J., L.** [US/US]; 2850 Eucalyptus Ave., Long Beach, California 90806 (US). **STEIN, James, DeWitt** [US/US]; 301 Knob Hill Ave., No. 16, Redondo Beach, California 90277 (US). **AILES, Gary** [US/US]; 2961 Conte Drive, Carson City, Nevada 89701 (US).

(74) Agents: **SHELDON, Jeffrey** et al.; 100 Corson Street, Third Floor, Pasadena, California 91103 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,

[Continued on next page]

(54) Title: SOLID WASTE DIGESTION SYSTEM



(57) Abstract: A system for digesting biodigestible feed preferably includes the steps of comminuting the feed, introducing feed, an oxygen containing gas, an accelerant, and bacteria into a digestion zone, the bacteria being suitable for digesting the feed under aerobic, anaerobic, and anoxic conditions. The contents of the digestion zone can be changed from aerobic operation to either anoxic or anaerobic operation, or vice versa, without changing the bacteria in the digestion zone.



SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

15 March 2012

A. CLASSIFICATION OF SUBJECT MATTER***C02F 11/02(2006.01)i, B09B 3/00(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C02F 11/02; C02F 3/30; C02F 3/12; C02F 11/04; C02F 11/00; C02F 103/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: digest , aerobic , anaerobic , gas

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2010-0041037 A (OH, WAN HO) 22 April 2010 See the whole document	1-56
A	US 2002-0030003 A1 (KEVIN P. O&APOS; LEARY et al.) 14 March 2002 See the whole document	1-56
A	US 05013442A A (DAVIS; H. FORBES et al.) 07 May 1991 See the whole document	1-56
A	US 2007-0102353 A1 (SUDHIR MURTHY et al.) 10 May 2007 See the whole document	1-56
A	US 2010-0155313 A1 (WILSON KEITH et al.) 24 June 2010 See the whole document	1-56
A	US 05545326A A (PETERING; JOHN L.) 13 August 1996 See the whole document	1-56



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

16 FEBRUARY 2012 (16.02.2012)

Date of mailing of the international search report

17 FEBRUARY 2012 (17.02.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsa-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

SONG, Hyun Jung

Telephone No. 82-42-481-5537



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/043895

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2010-0041037 A	22.04.2010	None	
US 2002-0030003 A1	14.03.2002	US 6488854 B2	03.12.2002
US 05013442A A	07.05.1991	EP 0440996 A1	14.08.1991
		EP 0440996 B1	24.03.1993
		US 05094752A A	10.03.1992
US 2007-0102353 A1	10.05.2007	US 7833415 B2	16.11.2010
		WO 2007-050699 A2	03.05.2007
		WO 2007-050699 A3	03.05.2007
US 2010-0155313 A1	24.06.2010	CA 2740914 A1	29.04.2010
		WO 2010-048225 A2	29.04.2010
		WO 2010-048225 A3	29.04.2010
		WO 2010-048225 A3	22.07.2010
US 05545326A A	13.08.1996	CN 1077551 C	09.01.2002
		CN 1176634 A	18.03.1998
		CN 1176634 C0	18.03.1998
		EP 0800482 A1	12.04.2000
		EP 0800482 A1	15.10.1997
		EP 0800482 A4	20.01.1999
		EP 0800482 B1	03.04.2002
		JP 10-511308 A	04.11.1998
		KR 10-0392831 B1	04.10.2003
		WO 96-20138 A1	04.07.1996